3. (Amended) Method as claimed in Claim 2, wherein the blades of the turbine are cooled with the cooling air, and the drilled film cooling openings are located on the leading blade edges and/or the trailing blade edges.

5. (Amended) Method as claimed in Claim 24, wherein the compressor of the gas turbine system itself is used for compressing the cooling air after the cooling process.

6. (Amended) Method as claimed in Claim 24, wherein an external compressor is used to compress the cooling air after the cooling process.

7. (Amended) Method as claimed in Claim 6, wherein the cooling air is compressed by the external compressor to the pressure of the compressor end air, and the compressed cooling air is added directly to the compressor end air.

9. (Amended) Method as claimed in Claim 24, wherein the cooling air is cooled after removal from the compressor to a lower temperature before it is used for the cooling of thermally loaded components.

10. (Amended) Method as claimed in Claim 24, wherein a cooler is used to cool the cooling air.

11. (Amended) Method as claimed in Claim 24, wherein water is injected directly into the cooling air in order to cool the cooling air.

12. (Amended) Method as claimed in Claim 24, wherein the cooling air is cooled with the compressor end air by using a heat exchanger.

15. (Amended) Apparatus for cooling a gas turbine system as claimed in any one of Claims 26, 27 and 28 wherein the cooled components include blades of the turbine,

and the drilled film cooling openings are located on the leading blade edges and/or the trailing blade edges.

E 16. (Amended) Apparatus for cooling a gas turbine system as claimed in any one of Claims 26, 27 and 28, wherein the second cooling lines merge into the compressor at an intermediate pressure level.

B4 17. (Amended) Apparatus for cooling a gas turbine system as claimed in any one of Claims 26, 27 and 28, wherein an external compressor is located in the second cooling lines, and the second cooling lines merge into the outlet of the compressor of the gas turbine system.

21. (Amended) Apparatus for cooling a gas turbine system as claimed in Claim 28, wherein a cooler operated with a different cooling medium is located downstream from the heat exchanger.

B5 22. (Amended) Apparatus for cooling a gas turbine system as claimed in any E one of Claims 26, 27 and 28, wherein means for cooling the cooling air are located in the first cooling lines.

Kindly add new Claims 23-29 as follows:

E 23. Apparatus for cooling a gas turbine system as claimed in claim 22, wherein a cooler is located in the first cooling lines.

B6 24. Method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while E resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, in which process compressed air is removed from the

compressor, is fed as cooling air for cooling inside an internal cooling channel through thermally loaded components of the combustor and/or the turbine, is then cooled and then compressed and added to the compressor end air, wherein, in the manner of a targeted leakage, a small part of the cooling air is fed for film cooling into the turbine stream through drilled film cooling openings provided on the components.

25. Method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, in which process compressed air is removed from the compressor, is fed as cooling air for cooling inside an internal cooling channel through thermally loaded components of the combustor and/or the turbine, is then cooled and then compressed using an external compressor, and added to the compressor end air, wherein, in the manner of a targeted leakage, a small part of the cooling air is fed for film cooling into the turbine stream through drilled film cooling openings provided on the components.

26. Apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor and/or the outlet of the compressor to components and second cooling lines from the components back to the compressor and/or the outlet of the compressor are provided, wherein a cooler is located in the second cooling lines and wherein the components to be cooled are provided with drilled film cooling openings that communicate with the first and second cooling lines.

27. Apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor and/or the outlet of the compressor to components and second cooling lines from the components back to the compressor and/or the outlet of the compressor are provided, wherein an injection device for injecting water into the cooling air is located in the second cooling lines, and wherein the components to be cooled are provided with drilled film cooling openings that communicate with the first and second cooling lines.

28. Apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor and/or the outlet of the compressor to components and second cooling lines from the components back to the compressor and/or the outlet of the compressor are provided, wherein a heat exchanger through which the compressor end air flows is located in the second cooling lines, and wherein the components to be cooled are provided with drilled film cooling openings that communicate with the first and second cooling lines.

29. Apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor

and/or the outlet of the compressor to components and second cooling lines from the components back to the outlet of the compressor are provided, wherein a cooler is located in the second cooling lines and an external compressor is located in the second cooling lines downstream of the cooler, and wherein the components to be cooled are provided with drilled film cooling openings that communicate with the first and second cooling lines.